

I CLAIM:

1. A suspension apparatus for operatively connecting a wheel of a vehicle to a chassis of the vehicle, the suspension apparatus comprising a control arm of fixed length having an inboard end thereof adapted for articulating attachment to the chassis, an outboard end thereof adapted for articulating attachment to the wheel, and a selectively movable intermediate attachment point thereof disposed between the inboard and outboard ends of the control arm and adapted for attachment of a compressible suspension element.

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2. The suspension apparatus of claim 1, further comprising a compressible suspension element having an upper end adapted for articulating attachment to the chassis and a lower end operatively attached to the movable intermediate attachment point of the control arm.

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3. The suspension apparatus of claim 1, wherein the compressible suspension element includes a spring.

4. The suspension apparatus of claim 1, wherein the compressible suspension element includes a damper.

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5. The suspension apparatus of claim 1, further comprising an actuator for selectively moving the intermediate attachment point with respect to the inboard and outboard ends of the control arm.

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6. The suspension apparatus of claim 5, wherein the actuator is a linear actuator having a first end operatively attached to the intermediate attachment point, and a second end operatively attached to the control arm.

7. The suspension apparatus of claim 6, wherein the linear actuator is an electrically driven actuator.

5 8. The suspension apparatus of claim 5, wherein the actuator is a linear actuator having a first end operatively attached to the intermediate attachment point, and a second end operatively attached to the chassis.

9. The suspension apparatus of claim 8, wherein the linear actuator is an
10 electrically driven actuator.

10. The suspension apparatus of claim 1, further comprising an articulating element having a first end thereof operatively attached to a fixed intermediate point disposed between the inboard and outboard ends of the control arm, for rotation about the
15 fixed intermediate point, and further having a distal end thereof defining the movable intermediate attachment point.

11. The suspension apparatus of claim 10, wherein the control arm defines a common centerline extending through both the inboard and outboard articulating ends of
20 the control arm, and the movable intermediate attachment point of the articulating element is disposed above the common centerline.

12. The suspension apparatus of claim 10, wherein the control arm defines a common centerline extending through both the inboard and outboard articulating ends of
25 the control arm, and the movable intermediate attachment point of the articulating element is disposed below the common centerline.

13. A suspension apparatus for operatively connecting a wheel of a vehicle to a chassis of the vehicle, the suspension apparatus comprising:

5 a control arm of fixed length having an inboard end thereof adapted for articulating attachment to the chassis, an outboard end thereof adapted for articulating attachment to the wheel, and a selectively movable intermediate attachment point thereof disposed between the inboard and outboard ends of the control arm and adapted for attachment of a compressible suspension element;

10 a compressible suspension element having an upper end adapted for articulating attachment to the chassis and a lower end operatively attached to the movable intermediate attachment point of the control arm; and

an actuator for selectively moving the intermediate attachment point with respect to the inboard and outboard ends of the control arm.

15 14. The suspension apparatus of claim 13, further comprising an articulating element having a first end thereof operatively attached to a fixed intermediate point disposed between the inboard and outboard ends of the control arm, for rotation about the fixed intermediate point, and further having a distal end thereof defining the movable intermediate attachment point.

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15. The suspension apparatus of claim 14, wherein the control arm defines a common centerline extending through both the inboard and outboard articulating ends of the control arm, and the movable intermediate attachment point of the articulating element is disposed above the common centerline.

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16. The suspension apparatus of claim 14, wherein the control arm defines a common centerline extending through both the inboard and outboard articulating ends of the control arm, and the movable intermediate attachment point of the articulating element is disposed below the common centerline.

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17. The suspension apparatus of claim 13, wherein the linear actuator includes a first end thereof operatively attached to the intermediate attachment point, and a second end thereof operatively attached to the control arm.

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18. The suspension apparatus of claim 13, wherein the linear actuator is an electrically driven actuator.

19. The suspension apparatus of claim 13, wherein the linear actuator includes
10 a first end thereof operatively attached to the intermediate attachment point, and a second end thereof operatively attached to the chassis.

20. A method for varying a suspension linkage ratio in a vehicle suspension operatively connecting a wheel of the vehicle to a chassis of the vehicle, the method
15 comprising:
connecting the wheel to the chassis with a suspension apparatus including a control arm of fixed length having an inboard end thereof adapted for articulating attachment to the chassis, an outboard end thereof adapted for articulating attachment to the wheel, and a selectively movable intermediate attachment point thereof disposed
20 between the inboard and outboard ends of the control arm and adapted for attachment of a compressible suspension element; and
selectively moving the intermediate attachment point with respect to the inboard and outboard ends of the control arm.

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